

Work Order ID 63913

Thursday, November 18, 2010 3:56:17 PM



Page 1

Item ID:	D4006-041	Accept		Setup	Start	
Revision ID:						
Item Name:	Tank Top Support Assembly				Stop	
Start Date:	11/19/2010	Start Qty: 4.00		Cust Item ID:		
Required Date:	12/3/2010	Req'd Qty: 4.00		Customer:		
Reference:						

Approvals:	Process Plan:	<u>ME</u>	Date:	<u>10-11-19</u>	Tooling:		Date:		Run	Start	
	QC:		Date:		SPC (Y/N):		Date:			Stop	

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D4006	A

100		0.00
Small Fab	Memo	0.00
Small Fab	Assemble as per dwg D4006	

4311/01/10

110	QC5- Inspect part completeness to step on W/O	0.00
QC	Memo	0.00
Quality Control		

Subline

120	Grey Sandtex(Ref:4.3.5.6) per QSI005 4.3	0.00
Powdercoat	Memo	0.00
Powder Coating	Start Time: <u>10:15</u>	
	Oven Temperature: <u>300°</u>	
	Finish Time: <u>10:45</u>	

M 112588

H BL 11-01-11

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			



NOTE: Date & initial all entries




Work Order ID 63913

Thursday, November 18, 2010 3:56:17 PM

Page 2

Item ID:	D4006-041	Accept		Setup	Start	
Revision ID:					Stop	
Item Name:	Tank Top Support Assembly					
Start Date:	11/19/2010	Start Qty:	4.00		Cust Item ID:	
Required Date:	12/3/2010	Req'd Qty:	4.00		Customer:	
Reference:						

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	
	QC:	Date:	SPC (Y/N):	Date:		Stop	

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130  QC Quality Control	QC3- Inspect Part Finish Memo	0.00 0.00		11/01/11		4	0		
140  HandFinish Hand Finishing	Memo 1- Apply glue and install Foam as per dwg Batch: 1115230 2- Install anchor nuts as per dwg	0.00 0.00							EB 11/01/11 (4)
150  QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00		Schultz		(4)			

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 63913

Thursday, November 18, 2010 3:56:17 PM

Page 3

Item ID: D4006-041

Accept

Setup Start

Revision ID:

Stop

Item Name: Tank Top Support Assembly

Start Date: 11/19/2010 Start Qty: 4.00

Cust Item ID:

Required Date: 12/3/2010 Req'd Qty: 4.00

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

160

Identify as per dwg & Stock Location: 167

0.00



Packaging

Memo

0.00

Packaging

170

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

C4410/1B (4)

11/01/13

ME

11-01-12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Thursday, November 18, 2010 3:56:16 PM

Page 1

[illegible]

Required Date: 12/3/2010

Required Qty: 4.00

Comments: IPP rev A 09.12.18 new issue Prelim EC verified by:DD IPP Rev:B
10.05.03 as per ECN10-562 DD verified by:EC
IPP Rev:C 10.07.12 added type of glue DD verf:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D4006-1 		Manufactured	No			100	Each	0.0000	1	4			
Angle						B63939	(4X)			E511/01/10			
D4006-3 		Manufactured	No			100	Each	0.0000	2	8			
Channel						B63938	(8X)			E511/01/10			
D4006-5 		Manufactured	No			140	Each	0.0000	1	4			
Foam						B63940	(4x)			E511/01/10			
MS20426AD3-RIVET 		Purchased	No			140	Each	5,984.000	4	16			
										E511/01/10			
										M19099	(16x)		
					<u>Location</u>			<u>Loc Qty</u>		<u>Loc Code</u>			
					ST316			5984					
					104374			1984					
					110398			4000					
MS20470AD4-Rivet, Universal Head 		Purchased	No			100	Each	492.0000	8	32			
										E511/01/10			
										M116188	(3)		
					<u>Location</u>			<u>Loc Qty</u>		<u>Loc Code</u>			
					ST309			455					
					114761			455					
					ST319			37					
					111916			37					

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Thursday, November 18, 2010 3:56:17 PM

Page 2

Work Order ID: 63913



Parent Item: D4006-041



Parent Item Name: Tank Top Support Assembly

Start Date: 11/19/2010

Required Date: 12/3/2010

Start Qty: 4.00

Required Qty: 4.00

MS21059L4

Purchased

No

140

Each

28.0000

2

8



Nutplate

E. Smith
11/18/10
8

Location

Loc Qty

Loc Code

ST301

28

114718

28

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

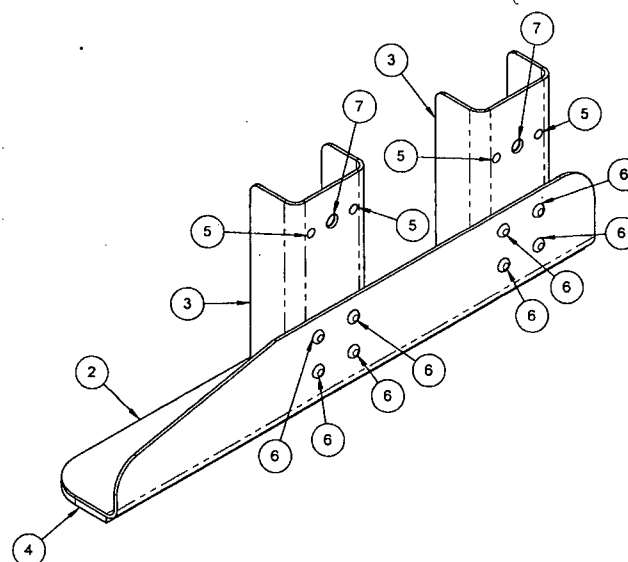
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

ITEM NO.	QTY. -041	PART NUMBER	DESCRIPTION	JOHN CAMERON AVIATION PART NUMBER
1	X	D4006-041	TANK TOP SUPPORT ASSEMBLY	JCA-M47-2-01
2	1	D4006-1	ANGLE	
3	2	D4006-3	CHANNEL	
4	1	D4006-5	FOAM	
5	4	MS20426AD3-4	RIVET	
6	8	MS20470AD4	RIVET	
7	2	MS21059-4	ANCHOR NUT	



D4006-041 TANK TOP SUPPORT ASSEMBLY

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: POWDER COAT "GREY SANDEXT" (4.3.5.6) PER DART QSI 005 4.3
BEFORE INSTALLATION OF D4006-5 FOAM AND MS21059-4 ANCHOR NUTS
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4006-041" AND B/N USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 0.47 lbs

RELEASED
2010-05-05
MH

A	NEW ISSUE	DESCRIPTION	BY	DATE
DESIGN				
DRAWN				
CHECKED				
MFG. APPR.				
APPROVED				
DE APPR.				
DATE	10.02.05			

DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		REV. A
DRAWING NO.	D4006	SHEET 1 OF 6
TITLE	UPPER RESTRAINT	SCALE
COPYRIGHT © 2010 BY DART AEROSPACE LTD		NTS
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.		

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

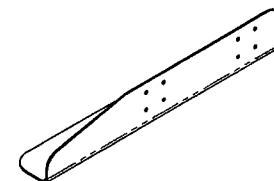
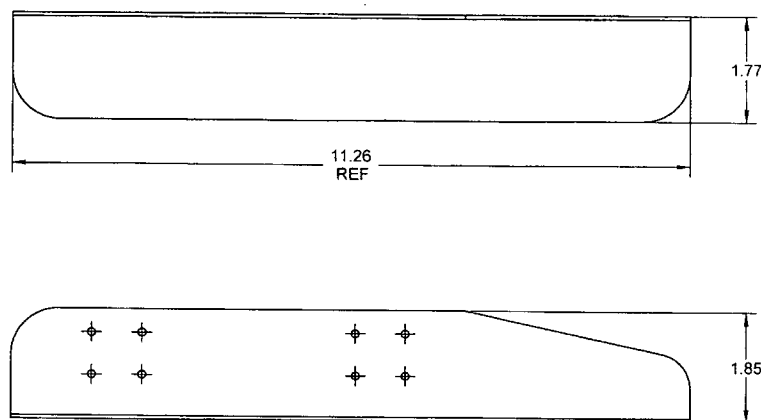
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

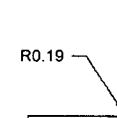
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE PART NUMBER	JOHN CAMERON AVIATION PART NUMBER
D4006-1	REF JCA-M47-2-01



#63913



D4006-1 ANGLE

RELEASED
2010-05-05
M

NOTES:

- 1) MATERIAL: MADE FROM D4006-1F
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.23 lbs

DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		D4006	SHEET 2 OF 6
APPROVED		TITLE	SCALE
DE APPR.		UPPER RESTRAINT	NTS
DATE	10.02.05	<small>COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE, OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

#63913

8 7 6 5 4 3 2 1

D

C

B

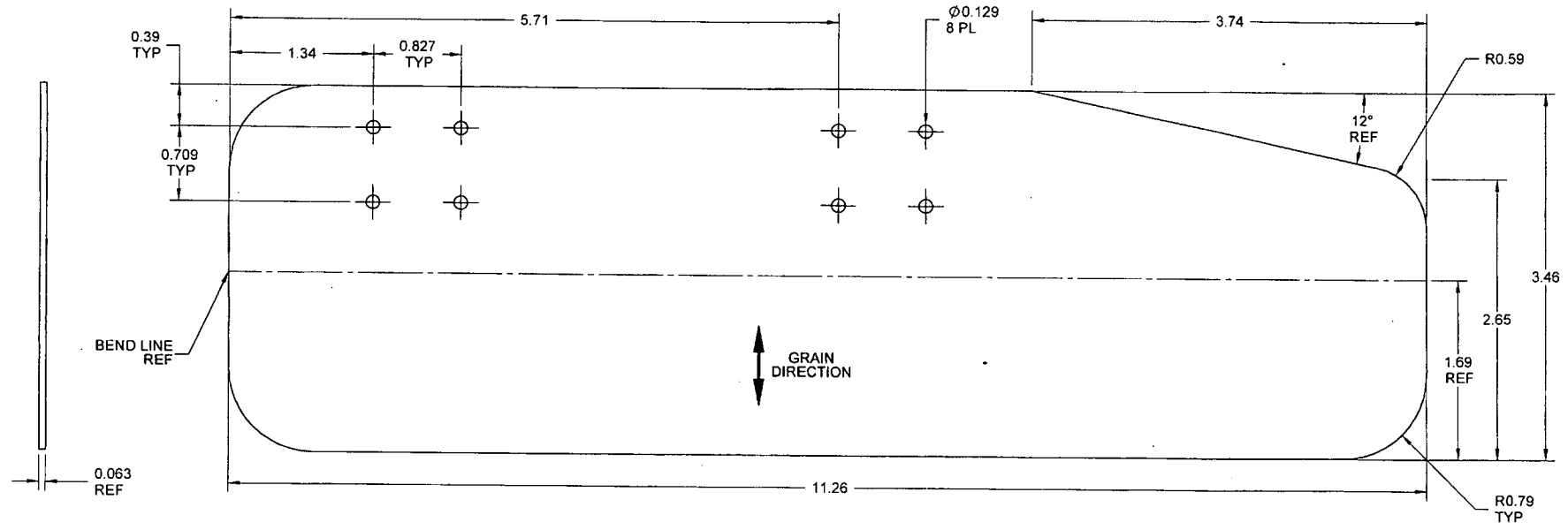
A

D

C

B

A



D4006-1F FLAT PATTERN

RELEASED
2010-05-05
MT

NOTES:

- 1) MATERIAL: 2024-T3 ALUMINUM SHEET, 0.063 THICK
PER QQ-A-250/4 OR AMS-QQ-A-250/4
OR AMS 4037 OR ASTM B209
REF DART SPEC M2024T3S.063
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.23 lbs

DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		D4006	SHEET 3 OF 6
APPROVED		TITLE	SCALE
DE APPR.		UPPER RESTRAINT	NTS
DATE	10.02.05	COPYRIGHT © 2010 BY DART AEROSPACE LTD	
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSES OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			

8 7 6 5 4 3 2 1

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

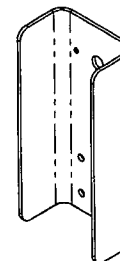
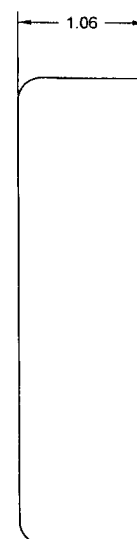
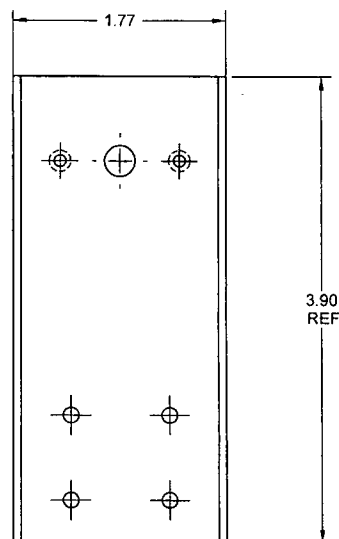
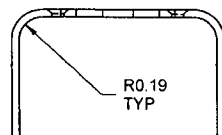
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE PART NUMBER	JOHN CAMERON AVIATION PART NUMBER
D4006-3	REF JCA-M47-2-01



#63913

D4006-3 CHANNEL

RELEASED
2010-05-05
MD

NOTES:

- 1) MATERIAL: MADE FROM D4006-3F
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.08 lbs

DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		D4006	SHEET 4 OF 6
APPROVED		TITLE	SCALE
DE APPR.		UPPER RESTRAINT	NTS
DATE	10.02.05	<small>COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



RELEASED
2010-05-05
m

2) FINISH: N/A
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: N/A
7) WEIGHT: 0.08 lbs

DESIGN		DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA DRAWING NO. D4006 TITLE UPPER RESTRAINT COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND UNCLASSIFIED. IT IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM. THIS DOCUMENT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT THE WRITTEN AUTHORIZATION OF DART AEROSPACE LTD.	REV. A
DRAWN			SHEET 5 OF 6
CHECKED			SCALE
MFG. APPR.			NTS
APPROVED			
DE APPR.			
DATE	10.02.05		

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

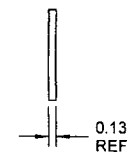
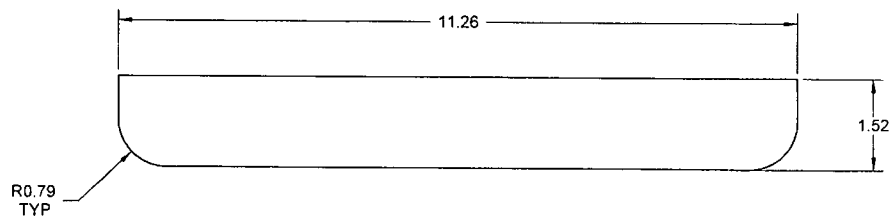
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE PART NUMBER	JOHN CAMERON AVIATION PART NUMBER
D4006-5	REF JCA-M47-2-01



#63913

D4006-5 FOAM

RELEASED
2010-05-05
MD

NOTES:

- 1) MATERIAL: BLACK NEOPRENE/EPDM/SBR BLEND SHEET, 0.125 THICK
PER ASTM D 1056 GRADE 2A1 OR SAE J-18 GRADE 2A1
REF DART SPEC M-4111N-S.125
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.08 lbs

DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO. D4006	REV. A
MFG. APPR.			SHEET 6 OF 6
APPROVED		TITLE UPPER RESTRAINT	SCALE
DE APPR.			NTS
DATE	10.02.05	<small>COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries